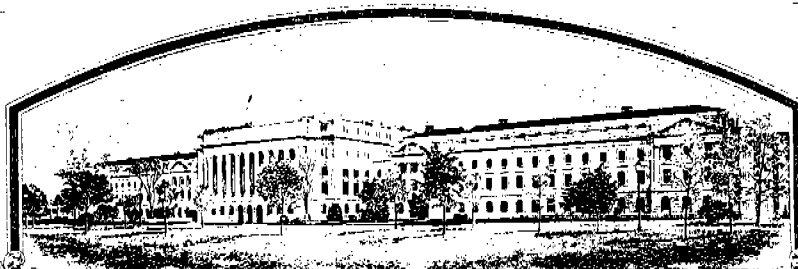


No.



7600050

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Seed Research Associates, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS SEEDS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS PROVIDED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'4555'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 19th day of July in the year of our Lord one thousand nine hundred and seventy-seven

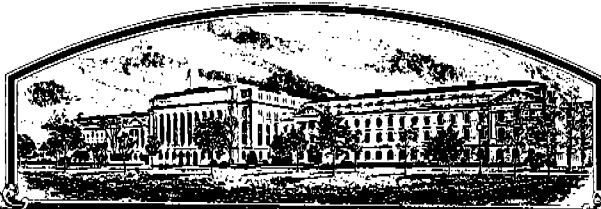
Attest:

R. J. Rollins
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Bob Berglund
Secretary of Agriculture



No.



7600050

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Robert J. Jacquinet and
Steven M. Jacquinet

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS PROVIDED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'4555'

In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this 19th day of July in
the year of our Lord one thousand nine
hundred and seventy-seven.

Attest

Kenneth H. E.
Acting
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R. Block
Secretary of Agriculture

13A Origin & Breeding History of 4555

Parentage: Scout x Sturdy

Original seed stock of 4555 was obtained by bulking four 1' x 10' rows. This bulk was from a single plant selection made in the F₄ generation.

From this preliminary increase sufficient seed was obtained to start test and evaluation. It now has had three years testing information.

Seed classes to be produced beyond breeders seed are foundation and certified seed. Only certified seed will be offered to the public.

No particular requirements are necessary in order to maintain the purity of 4555 besides using a clean drill for seeding, roguing out any variants, and a clean combine for harvesting.

4555 is very stable for such practical agronomic characteristics as heading, maturity, height, and rust reaction. 4555 is no more variable than Scout when grown under the same conditions.

Foundation seed will be grown according to Kansas Crop Improvement requirements.

Roguing is used to remove variants. Offtypes whether taller, shorter, later, or of differing glume color should represent either mechanical mixtures or natural hybrids. Off types different from those mentioned should not be present in a commercial field planted to certified seed of 4555.

13B Botanical Description of 4555

The seed is hard red with short brush and crease narrow and deep with cheeks rounded.

The juvenile growth is prostrate and green. The flag leaf is erect early but later held horizontal with a twist to left.

At maturity the head is nodding with crook in peduncle just below the head and usually has a sterile spikelet at the bottom.

The head is fusiform, mid dense, awned, yellow and about 9 cm. long and 15 mm. wide.

The glumes are long and wide, glabrous, with the shoulder oblique and the beak acuminate.

It is semi dwarf height and early in maturity being Triumph season.

13D Novelty of 4555

4555 compared to its Scout parent

	Scout	4555
Days to heading compared to Scout	0	-4
Height	103 cm.	76 cm.
Lodging	30%	0%
Leaf rust rating	3.5*	4.5*
Mixing time	3 3/4 min.	5 5/8 min.
Loaf volume	good	good
*1-5 rating with 5 best		

*'4555' is most similar to 'Scout' wheat.**

00006

**per letter of Sep^r 9, 1976 KHE*

13E Ownership of 4555

Seed Research Associates Inc. are owners of 4555.

Kenneth Goertzen and Betty Goertzen are the plant breeders who developed the line.

00007

Irrigated yield plot
 Scott City, Kansas - 1975
 3 waterings

76-50

VARIETY	YIELD Bu./acre	Height cm.	Days to Heading Compared to Scout	Lodging%	Leaf Rust Rating 5 best	Protein
Scout	63	103	0	30%	3.5	—
Dual I	74.5	82	-1	0%	5	14.45
Dual III	69	78	-1	0%	5	—
Dual V 5210	67	82	-3	0%	5	15.68
Dual VIII	71	83	-1	0%	5	15.02
2148	66	69	+4	0%	5	—
Plainsman IV	69.8	85	-4	0%	5	18.12
Plainsman V	72.5	78	-5	0%	5	17.0
Plainsman IX	66.7	78	-4	0%	5	17.55
Plainsman VIII	74	84	-4	0%	5	16.92
4555	70.3	76	-4	0%	4.5	—
4543	63.5	74	-3	0%	3	15.78
Eagle	64	95	0	10%	4	—
Centurk	61	98	+2	10%	4	—

00008

76-50

Dryland Yield and Observation Plot
1975 Haver, Kansas
(Reno County)

Variety	Days to heading compared to Triumph 64	Yield Bu/Acre	Test weight	Yield as % of Triumph 64	% Protein	# Protein/Acre	Protein per Acre as % of Triumph 64
Triumph 64	0	28	60	100	10.9	183	100
Dual T	+2	51	60	182	10.2	312	170
Dual III	+4	57	61	204	12.0	410	224
Dual V	+4	53	60	189	11.9	378	207
Dual VIII	+2	47	60	168	10.9	307	168
2148	+2	47	62	168	11.9	336	184
Plainsman IV	0	51	61	182	13.4	410	224
Plainsman II	-1	64	62	229	12.9	495	270
Plainsman VIII	0	72	62	257	13.6	587	321
4555	-2	50	61	179	10.8	324	177

Continuous crop - low soil fertility

00009

Hard Winter Wheat Quality Research Unit US Grain
Marketing Research Center Manhattan Kansas

Table 1. Chemical, Milling and Baking Data for Genetically High-Protein Special Plant Breeders' Samples of Hard Winter Wheat Progenies Harvested in Scott County, Kansas in 1974. 1/

Variety	C.I. or Sel. No.	Wheat 2/				Bread-baking Data 2/							
		Wt. Per Bu. lbs.	Ash %	Pro- tein %	Flour Yield %	Flour 2/		Ab- sorp- tion %	Mix- ing Time min.	Crumb Grain	Loaf Volume		
						Ash %	Pro- tein %				As Rec'd	Cor- rect- ed To	
													cc.
GROUP 1													
Scout	13546	63.4	1.61	12.6	73.7	.44	11.9	65.5	3 7/8	S	913	14.5% P	1091
LB 7514		57.1	1.75	15.9	71.2	.46	14.9	70.4	4 1/8	S	1182	1152 5/	1023
LB 7515		57.6	1.72	14.7	72.5	.47	13.8	65.2	4 1/2	Q-S	979		
LB 7516		60.6	1.81 Q	14.7	73.8	.53 Q	14.1	69.9	4	S	1072	1100 5/	
LB 7517		62.0	1.60	16.3	76.0	.43	15.6	66.5	3 1/4	S	1139	1066	
LB 7518		61.9	1.61	17.9	76.3	.46	17.2	71.4	10 1/2 U	S	1271	1086	
LB 7519		62.0	1.51	16.5	76.5	.43	16.0	70.7	8 3/8 Q	S	1213	1108	
LB 7520	5221	61.7	1.58	13.8	75.7	.51 Q	13.3	65.0	6 1/8	S	1061	1150	
LB 7528		62.6	1.58	14.5	75.8	.44	13.8	68.3	5 7/8	S	1010	1056	
GROUP 2													
Scout	13546	63.4	1.65	12.5	70.0	.43	11.4	66.4	3 3/4	S	920	1146	
LB 7567		61.5	1.64	15.9	73.0	.43	14.5	67.2	3	S	1102	1102	
LB 7568		61.0	1.60	15.8	73.9	.43	14.6	69.7	3 3/4	S	1105	1098 5/	
LB 7569		61.4	1.58	13.9	74.8 4/	.50 Q	12.8	61.7	6 1/2	S	1020	1145	
LB 7570		60.3	1.68	14.9	73.3	.48	13.8	64.2	3 3/8	S	1058	1107	
LB 7571	5232	59.6	1.83 Q	14.2	73.2 4/	.49 Q	13.0	62.2	7 1/2 Q	S	1100	1220	
LB 7572		60.6	1.56	16.4	73.6	.43	15.2	69.4	5 3/4	S	1170	1120 6/	
LB 7573	4555	62.7	1.59	13.8	73.9	.43	12.6	65.4	5 1/4	S	977	1111	
LB 7574		60.8	1.65	16.4	74.0	.44	15.1	70.6	3 3/8	S	1125	1084 5/	

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.

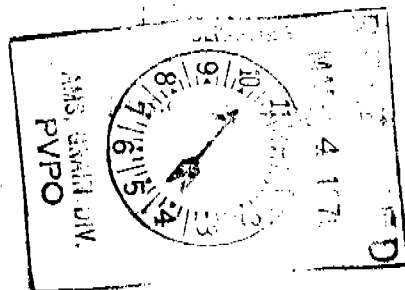
- 13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.

13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.

13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

- 13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.

- 13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.



Research Center
Rural Route 2, Box 48
Scott City, Kansas 67871
(316) 872-2807

Marketing Offices:
35 Corporate Woods
9101 W. 110th Street
Overland Park, Kansas 66210
(913) 381-9630



SEED RESEARCH

Seed Research, Route 2, Box 48, Scott City, Kansas ,
a division of Agrigenetics Corporation, and the sur-
vivor of the merger of Seed Research Associates, Inc.
has for \$20,000 and other considerations transferred
ownership to Greenbush Seed and Supply, Route 4, Girard,
Kansas of Plant Variety Protection certificate 7600050
issued for 4555 wheat variety which has the issue date
of the 19th day of July, 1977. This transfer was made
effective March 27, 1981.

4-15-81
Date

Kenneth L. Goertzen
Kenneth L. Goertzen, President
Seed Research



David W. Summers
Notary

76-50

NOV 22 1982



Greenbush Seed & Supply Inc.

BUYERS, SELLERS, AND PROCESSORS OF FIELD SEEDS
RURAL ROUTE 4 • GIRARD, KANSAS 66743

November 22, 1982

Kenneth Evans, Commissioner
USDA, Agricultural Marketing Service
National Agricultural Library Bldg.
Beltsville, Maryland 20705
301-344-2518

Subject: Transfer of PVP Wheat Certificates - No. 7600025, 'GB 2148'
No. 7600050, '4555'

Dear Sir:

For good and valuable consideration, receipt of which is hereby acknowledged, Greenbush Seed & Supply, Inc. hereby transfers unto Robert J. Jacquinet & Steven M. Jacquinet ownership of Plant Variety Protection Certificate Number 7600025 issued for the wheat variety 'GB 2148' on the 16th day of March, 1978 and of Plant Variety Protection Certificate Number 7600050 issued for the wheat variety '4555' on the 19th day of July, 1977.

You are hereby instructed to issue a new certificate and a recording for each of the above named varieties, all of which are to reflect the new ownership as stated above, at a fee of \$10.00 each and \$5.00 each respectively.

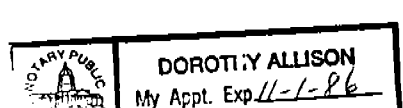
A check in the amount of \$30.00 payable to the U.S. Treasury was issued on the 14th day of September, 1982 for the services that are to be rendered.

The new certificates are to be forwarded to: Steven M. Jacquinet
P.O. Box 342 St. Paul, Kansas 66771.

Greenbush Seed & Supply, Inc.

Steven M. Jacquinet
Steven M. Jacquinet, Secretary

Dorothy Allison
Notary



Nov 1, 1986
my commission expiration date

Enclosures: PVP Certificate No. 7600025 'GB 2148'
PVP Certificate No. 7600050 '4555'

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse;

NAME OF APPLICANT(S)

Seed Research Associates Inc.

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

R.R. 2, Box 48
Scott City, Kansas, 67871

FOR OFFICIAL USE ONLY

PVPO NUMBER

7600050

VARIETY NAME OR TEMPORARY DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. 0 8 9 or 0 9) when number is either 99 or less or 9 or less.

1. KIND:	
1	1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB
2. TYPE:	
2	1 = SPRING 2 = WINTER 3 = OTHER (Specify) 2 1 = SOFT 2 = HARD 3 = OTHER (Specify)
2	1 = WHITE 2 = RED 3 = OTHER (Specify)
3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:	
0 0 0	FIRST FLOWERING 0 0 0 LAST FLOWERING
4. MATURITY (50% Flowering):	
0 4	NO. OF DAYS EARLIER THAN 2 1 = ARTHUR 2 = SCOUT 3 = CHRIS
0 0	NO. OF DAYS LATER THAN 7 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7 = Triumph
5. PLANT HEIGHT (From soil level to top of head):	
0 7 6	CM. HIGH Scott County Irrigated
0 0	CM. TALLER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS
2 7	CM. SHORTER THAN 2 4 = LEMHI 5 = NUGAINES 6 = LEEDS
6. PLANT COLOR AT BOOTING (See reverse):	
0	1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN
7. ANTER COLOR:	
1	1 = YELLOW 2 = PURPLE
8. STEM:	
1	Anthocyanin: 1 = ABSENT 2 = PRESENT
2	Waxy bloom: 1 = ABSENT 2 = PRESENT
0	Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
1	Internodes: 1 = HOLLOW 2 = SOLID
0 3	NO. OF NODES (Originating from node above ground) 2 4 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW
9. AURICLES:	
1	Anthocyanin: 1 = ABSENT 2 = PRESENT
2	Hairiness: 1 = ABSENT 2 = PRESENT
10. LEAF:	
1	Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (Specify)
2	Flag leaf: 1 = NOT TWISTED 2 = TWISTED
0	Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT
0	Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
0 8	MM. LEAF WIDTH (First leaf below flag leaf) 2 1 CM. LEAF LENGTH (First leaf below flag leaf)

00004

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION 4555	2. KIND NAME Hard red winter wheat	FOR OFFICIAL USE ONLY	
3. GENUS AND SPECIES NAME <u>Triticum aestivum</u>	4. FAMILY NAME (Botanical) Graminaeae	PV NUMBER 7600050	
	5. DATE OF DETERMINATION 1973	FILING DATE 3/4/76	TIME 10:30 A.M.
		FEE RECEIVED \$ 250.00 \$ 250.00 \$ 250.00	BALANCE DUE \$ _____ \$ _____ \$ _____
6. NAME OF APPLICANT(S) Seed Research Associates Inc.	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Route 2, Box 48 Scott City, Kansas, 67871	8. TELEPHONE AREA CODE AND NUMBER 316-872-2807	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. STATE OF INCORPORATION Kansas	11. DATE OF INCORPORATION June, 1973

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

Kenneth L. Goertzen, President
Seed Research Associates, Inc.
Route 2, Box 48
Scott City, Kansas, 67871

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Botanical Description of the Variety
- ☒ 13C. Exhibit C, Objective Description of the Variety
- ☒ 13D. Exhibit D, Data Indicative of Novelty
- ☒ 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☒ YES ☐ NO14B. Does the applicant(s) specify that this variety be limited as to number of generations? ☒ YES ☐ NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed?

☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

3/25/80

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes that the variety is distinct, uniform, and stable as required in Section 41 and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

3/2/76

(DATE)

Kenneth L. Goertzen

(SIGNATURE OF APPLICANT)

00001

(DATE)

(SIGNATURE OF APPLICANT)

11. HEAD:

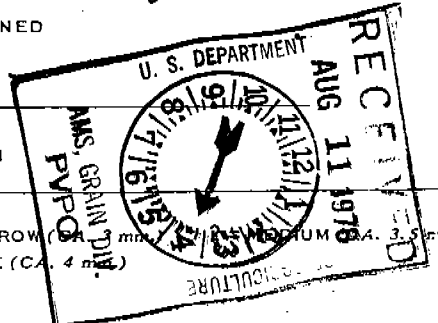
☐ 2 Density: 1 = LAX 2 = **Mid** DENSE

☐ 4 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) **fusiform**

☐ 4 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

☐ 2 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify):

☐ 09 CM. LENGTH ☐ 15 MM. WIDTH



12. GLUMES AT MATURITY:

☐ 3 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

☐ 3 Width: 1 = NARROW (CA. 1 mm.) 2 = MEDIUM (CA. 3 mm.) 3 = WIDE (CA. 4 mm.)

☐ 1 1 **Glabrous** 2 Pubescent

☐ 2 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

☐ 3 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☐ 1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

☐ 1 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☐ 1 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☐ 4 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL 4 **variable, but primarily oval**

☐ 1 Cheek: 1 = ROUNDED 2 = ANGULAR

☐ 1 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

☐ 1 Brush: 1 = NOT COLLARED 2 = COLLARED

☐ Phenol reaction (See Instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify)

☐ 06 MM. LENGTH ☐ 03 MM. WIDTH ☐ GM. PER 1000 SEEDS

17. SEED CREASE:

☐ 1 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

☐ 3 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 STEM RUST (Races) ☐ 2 LEAF RUST (Races) ☐ 0 STRIPE RUST (Races) ☐ 0 LOOSE SMUT

☐ 0 POWDERY MILDEW ☐ 0 BUNT ☐ OTHER (Specify)

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY ☐ 0 APHID (Bydv.) ☐ 0 GREEN BUG ☐ 0 CEREAL LEAF BEETLE

☐ OTHER (Specify) **HESSIAN FLY** ☐ GP ☐ A ☐ B ☐ C

☐ RACES: ☐ D ☐ E ☐ F ☐ G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant-tillering		Seed size	
Leaf size		Seed shape	
Leaf color		Coleoptile elongation	
Leaf carriage		Seedling pigmentation	

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form

(a) L.W. Briggles and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Wall's, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

00005